12. (First amendment) A composition according to claim 1, said composition consisting of a tooth paste, comprising, in mg%, chondroitin sulfate, 0.0 5; and unrefined kernel olive oil,1-5;and one or more of D-glucosamine sulfate, 0.05; and quercetin, 0.03; in a tooth paste vehicle.

13. (First amendment) A composition according to claim 1, said composition consisting of a sunscreen composition, comprising, in mg% , chondroitin sulfate, 0.0 , and unrefined kernel oil, 1-5; and one or more of D-glucosamine sulfate, 0.05: quercetin, 0.03; and titanium dioxide, 1-5; in a sun screen vehicle.

Please amend claim 24 and 25 as follows:

24. (First amendment) The composition according to claim 1, wherein said inflammatory disease is arthritis and said composition is designed for oral administration, comprising non-bovine chondroitin sulfate, quercetin, D-glucosamine sulfate, and unrefined kernel olive oil.

25. (First amendment) The composition according to claim 9, comprising, in mg%, chondroitin sulfate, 0.05; D-glucosamine sulfate, 0.05; quercetin, 0.03; and, unrefined kernel olive oil, 1-5.

In claims 26-35, delete "in" prior to the words "kernel olive oil", and replace with --and said--

REMARKS

Claims 1-13 and 22-35 are pending. Applicant respectfully requests reconsideration in the light of the amended claims and arguments below.

The concentrations of the components in claims 9, 11-13, and 25 have been amended to insert the decimal points in the correct location. The original numbers reflected only the milligrams of each component, and the contribution of the % calculation was inadvertently omitted, that is, we neglected to divide by 100. No new matter is being added by these corrections; the corrected values are withing the ranges shown in the specification on p. 5, lines 15-22..

Claims 26-35 have been slightly amended so as to refer the kernel olive oil back to its description in claim 1.

Rejections Under 35 USC 103(a) Over Murad

The examiner rejects claims 1-9, 11-13 and 24-35 under 35 USC 103(a) as being obvious over Murad (USPN 5,804,594) on an allegation that the patent discloses the treatment of unhealthy skin with an assortment of topical compositions containing

glucosamine sulfate, chondroitin sulfate and quercitin. Applicant traverses these rejections.

As stated in the PTO Guidelines on rejections based on obviousness (62 FR 62[illegible] (1997)),

"To establish a prima facie case of obviousness case, it is essential that Office personnel find some motivation or suggestion to make the claimed invention in light of the prior art teachings. In order to find such motivation or suggestion there should be a reasonable likelihood that the claimed invention would have the properties disclosed by the prior art teachings. These disclosed findings should be made with a complete understanding of the first three "Graham factors." Thus, Office personnel should (1) determine the "scope and content of the prior art"; (2) ascertain the "differences between the prior art and the claims at issue"; and (3) determine "the level of ordinary skill in the pertinent art."

When an examiner alleges a *prima facie* case of obviousness, such an allegation can be overcome by showing that (i) there is a teaching away or no reasonable expectation of success); (ii) objective indicia of patentability exist (for example, unexpected results); or (iii) secondary considerations exist (for example, commercial success or long felt but unfulfilled need). See, *Graham v. John Deere Co.* 383 U.S. 1, 148 USPQ 459 (1966); *U.S. v. Adams*, 383 U.S. 39, 51-52 (1966); *Gillette Co. v. S.C. Johnson & Son, Inc.*, 16 USPQ2d 1923, 192[illegible] (Fed. Cir. 1990); *Bausch & Lomb, Inc. v. Barnes-Hind/Hydrocurve*, 230 USPQ 416, 419-20 (Fed. Cir. 1986).

Generic claim 1 has been amended so as to make unrefined kernel olive oil, not optional, but an obligatory component of the claimed composition, along with a non-bovine chondroitin sulfate. The Murad reference makes no mention or suggestion regarding olive oil as a component of his compositions, and, therefore, provides no motivation for including it in the presently claimed composition. For this reason alone, Murad cannot support rejection of the present claims.

Murad also fails as a reference supporting the examiner's finding of *prima facie* obviousness for a variety of additional reasons, for example:

purpose (1) Murad does not suggest that the source of the chondroitin sulfate should be of non-bovine origin, as the present claims require. This is a safety feature not considered by Murad.

preamble (2) Murad does not suggest that his compositions are anti-inflammatory against diseases caused by biochemicals secreted from mast cells, as is required in the present claims.

oral only (3) Murad does not suggest compositions for oral use, as is provided in present claim 1. In fact, Murad teaches away from the present claims by limiting the use of his compositions to the "treatment of skin conditions." (See patent abstract and generic claim 1).

For these reasons, it would be appropriate for the examiner to withdraw all claim rejections based on Murad.

Rejection of Claim 22 Under 35 USC 103(a) Over a Combination of Murad With the Florio Reference

The examiner has rejected claim 22 over the Murad-Florio reference combination, arguing that Murad's failure to teach a composition used for(*sic*) inflammation is cured by Florio's disclosure of a dietary regimen containing chondroitin sulfate and glucosamine sulfate that is said to provide symptomatic relief from arthritis.

In addition to the facts that Florio does not suggest non-bovine chondroitin sulfate, does not indicate which isomer of glucosamine sulfate (D- or L-) is called for (a critical lapse physiologically), and does not correct the absence of olive oil in Murad's composition, the examiner is well aware that a combination of two references fails to support a finding of obviousness when one of the combination (here, Murad) falls.

It would also be appropriate for the examiner to withdraw her rejection of claim 22.

Objection to Claims 10 and 23

The examiner objects to claims 10 and 23 as being dependent on a rejected base claim.

As claim 1 as amended is not rejectable over Murad, claims 10 and 23 are valid dependent claims.

Conclusions

All claims now being patentable, the examiner is respectfully urged to withdraw all rejections and to pass this application to issue.

Respectfully submitted,

Date: 5/15/02

Melvin Blecher, Ph.D.
Attorney-at-Law
Reg. No. 33,649

Law Offices of Dr. Melvin Blecher
4329 Van Ness Street, NW
Washington, DC 20016-5625
tel: 202-363-3338
Fax: 202-362-8404

MARKED UP CLAIMS

1. A composition with synergistic anti-inflammatory properties for use in conditions induced by inflammatory disease-causing biomolecules released from mast cells by the activation and degranulation of said mast cells, comprising a non-bovine proteoglycan and unrefined kernel olive oil, and one or more of a D-hexosamine sulfate, a flavonoid, [kernel olive oil,] S-adenosylmethionine , and a histamine-1-receptor antagonist, in an appropriate excipient or vehicle for oral or topical administration.

9. The composition according to claim 1, wherein said inflammatory disease is arthritis and said composition is contained in an ointment or cream for topical application, comprising, in mg%, chondroitin sulfate 0.05; unrefined kernel olive oil, 1-5; and one or more of: [D-glucosamine sulfate, 0.05; and quercetin, 0.03[; and kernel olive oil, 15].

11. A composition according to claim 1, said composition consisting of a mouth wash composition, comprising chondroitin sulfate, 0.4 M; unrefined kernel olive oil [15 mg%] 0.5-1.5%; and one or more of D-glucosamine sulfate, 0.4 M; and quercetin, 0.3 M[; and S-adenosylmethionine, 0.15M;] in a mouth wash vehicle.

12. A composition according to claim 1, said composition consisting of a tooth paste, comprising, in mg%, chondroitin sulfate, 0.0 5; and unrefined kernel olive oil.1-5;and one or more of D-glucosamine sulfate, 0.05; and quercetin, 0.03; in a tooth paste vehicle.

13. A composition according to claim 1, said composition consisting of a sunscreen composition, comprising, in mg% , chondroitin sulfate, 0.05, and unrefined kernel oil 1-5; and one or more of D-glucosamine sulfate, 0.05; quercetin, 0.03; and titaniun dioxide, 1-5; in a sun screen vehicle.

24. The composition according to claim 1, wherein said inflammatory disease is arthritis and said composition is designed for oral administration, comprising non-bovine chondroitin sulfate, quercetin, D-glucosamine sulfate, and unrefined kernel olive oil.

25. The composition according to claim 9, comprising, in mg%, chondroitin sulfate, 0.05; D-glucosamine sulfate, 0.05; quercetin, 0.03; and, unrefined kernel olive oil, 1-5.

CLEAN COPY OF ALL CLAIMS

D1

1. A composition with synergistic anti-inflammatory properties for use in conditions induced by inflammatory disease-causing biomolecules released from mast cells by the activation and degranulation of said mast cells, comprising a non-bovine proteoglycan and unrefined kernel olive oil, and one or more of a D-hexosamine sulfate, a flavonoid, S-adenosylmethionine , and a histamine-1-receptor antagonist, in an appropriate excipient or vehicle for oral or topical administration.

2. The composition according to claim 1, wherein said proteoglycan is selected from the group consisting of non-bovine chondroitin sulfate, keratan sulfate, dermatan sulfate and hyaluronic acid.

3. The composition according to claim 2, wherein said chondroitin sulfate is derived from shark cartilage.

4. The composition according to claim 1, wherein said hexosamine sulfate is D-glucosamine sulfate.

5. The composition according to claim 1, wherein said flavonoid is selected from the group consisting of quercetin, myrisetin, genistein and kaempferol.

6. The composition according to claim 1, wherein said olive oil contains omega fatty acids and alpha-tocopherol.

7. The composition according to claim 24, said composition being for oral use, comprising 300 mg each of non-bovine chondroitin sulfate C, quercetin and D-glucosamine sulfate, in kernel olive oil.

8. The composition according to claims 7 or 24, further comprising 100 mg of S-adenosylmethionine.

D2

9. The composition according to claim 1, wherein said inflammatory disease is arthritis and said composition is contained in an ointment or cream for topical application, comprising, in mg%, chondroitin sulfate 0.05; unrefined kernel olive oil, 1-5; and one or more of: D-glucosamine sulfate, 0.05; and quercetin, 0.03.

10. The composition according to claim 9, further comprising diphenhydramine, 5mg%.

D3

11. A composition according to claim 1, said composition consisting of a mouth wash composition, comprising chondroitin sulfate, 0.4 M; unrefined kernel olive oil 0.5-1.5 mg%; and one or more of D-glucosamine sulfate, 0.4 M; and quercetin, 0.3 M, in a mouth wash vehicle.

12. A composition according to claim 1, said composition consisting of a tooth paste, comprising, in mg%, chondroitin sulfate, 0.0 5; and unrefined kernel olive oil, 1-5;and one or more of D-glucosamine sulfate, 0.05; and quercetin, 0.03; in a tooth paste vehicle.

D3

13. A composition according to claim 1, said composition consisting of a sunscreen composition, comprising, in mg% , chondroitin sulfate, 0.05, and unrefined kernel oil 1-5; and one or more of D-glucosamine sulfate, 0.05; quercetin, 0.03; and titanium dioxide, 1-5; in a sun screen vehicle.

22. A method of treating a subject suffering from an inflammatory disease, wherein said inflammatory disease results from biomolecules secreted from activated and degranulated mast cells, said inflammatory disease being selected from the group consisting of osteoarthritis, cancer, fibromyalgia, atherosclerosis, inflammatory bowel disease, interstitial cystitis, irritable bowel syndrome, migraines, angina, chronic prostatitis, eczema, arthritis, multiple sclerosis, psoriasis, sun burn, and periodontal disease, comprising the step of administering to said subject an effective amount of a composition according to claim 1.

23. The composition according to claim 1, wherein said histamine-1-receptor antagonist is diphenhydramine.

24. The composition according to claim 1, wherein said inflammatory disease is arthritis and said composition is designed for oral administration, comprising non-bovine chondroitin sulfate, quercetin, D-glucosamine sulfate, and unrefined kernel olive oil.

D4

25. The composition according to claim 9, comprising, in mg%, chondroitin sulfate, 0.05; D-glucosamine sulfate, 0.05; quercetin, 0.03; and, unrefined kernel olive oil, 1-5.

26. The composition according to claim 1 for oral use in allergic conditions, comprising chondroitin sulfate, a flavonoid selected from the group consisting of quercetin, myricetin and kaempferol, and said kernel olive oil.

27. The composition according to claim 26, comprising 200 mg each of chondroitin sulfate and kaempferol and said kernel olive oil.

D5

28. The composition according to claim 26, comprising chondroitin sulfate and myricetin and said kernel olive oil.

29. The composition according to claim 28, supplemented with a histamine-1-receptor antagonist.

30. The composition according to claim 29, wherein said antagonist is diphenhydramine.

31. The composition according to claim 1, wherein said inflammatory disease is cancer and wherein said composition is designed for oral use, comprising 25-50 mg of genistein and

150-300 mg of quercetin, and said kernel olive oil.

32. The composition according to claim 1, wherein said inflammatory disease is atherosclerosis with or without myocardial ischemia, comprising 100-300 mg each of chondroitin sulfate , myricetin and S-adenosylmethionine, and said kernel olive oil, in a vehicle for oral use.

33. The composition according to claim 1, wherein said inflammatory disease is interstitial cystitis, said composition comprising 100-300 mg of chondroitin sulfate, 100-300 mg of hyaluronic acid, and 200-400 mg quercetin, and said kernel olive oil, in a vehicle for oral use.

34. The composition according to claim 1, wherein said inflammatory disease is prostatitis, said composition comprising 100-200 mg of chondroitin sulfate, 100-200 mg hyaluronic acid and 200-400 mg of quercetin, and said kernel olive oil, in a vehicle for oral use.

35. The composition according to claim 1, wherein said inflammatory disease is multiple sclerosis, said composition comprising 100-300 mg each of chondroitin sulfate, myricetin and S-adenosylmethionine, and said kernel olive oil, in a vehicle for oral use.